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Thomas G. Anderson

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* THOMAS G. ANDERSON

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Appeal 2009-005576  
Application 10/801,756<sup>1</sup>  
Technology Center 2100

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*Before* JOHN C. MARTIN, CARLA M. KRIVAK, and  
JAMES R. HUGHES, *Administrative Patent Judges.*

HUGHES, *Administrative Patent Judge.*

DECISION ON APPEAL<sup>2</sup>

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<sup>1</sup> Application filed March 16, 2004. The real party in interest is Novint Technologies, Inc. (App. Br. 2.)

<sup>2</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

## STATEMENT OF THE CASE

Appellant appeals from the Examiner's rejection of claims 1-15 under authority of 35 U.S.C. § 134(a). The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

We reverse.

### *Appellant's Invention*

The invention at issue on appeal relates to a method of providing a human-computer interface with a three-dimensional display space, and utilizing an input device having a range of motion in three dimensions. (Spec. 2:1. 25 to 3:20; Spec. 13:21 to 15:22.)<sup>3</sup>

### *Representative Claim*

Independent claim 1 further illustrates the invention. It read as follows:

1. A method of providing a human-computer interface, using an input device having a range of motion in three dimensions, denoted the x-device dimension, the y-device dimension, and the z-device dimension, comprising:

a) Providing a display space, having mutually orthogonal x-display and y-display dimensions, where the x-display dimension and the y-display dimension together define a plane orthogonal to a user direction of view into the display space, and a z-display dimension orthogonal to both the x-display dimension and the y-display dimension;

b) Establishing a correspondence between motion of the input device and motion of a cursor relative to the display space;

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<sup>3</sup> We refer to Appellant's Specification ("Spec."); Appeal Brief ("App. Br.") filed January 3, 2008; and Reply Brief ("Reply Br.") filed May 23, 2008. We also refer to the Examiner's Answer ("Ans.") mailed May 9, 2008.

c) Providing a three-dimensional application domain, having corresponding interface characteristics;

d) Providing a personal domain, having corresponding interface characteristics;

e) If the user is interacting according to the application domain characteristics, then determining if user motion of the input device corresponds to cursor motion into an application-to-personal defined range of coordinates in the z-display dimension, and, if so, then providing interaction according to the personal domain characteristics;

f) If the user is interacting according to the personal domain characteristics, then determining if user motion of the input device corresponds to motion of the cursor into a personal-to-application defined range of coordinates in the z-display dimension, and, if so, then providing interaction according to the application domain characteristics.

### *Reference*

The Examiner relies on the following reference as evidence of unpatentability:

Robertson

US 6,054,989

Apr. 25, 2000

### *Rejection on Appeal*

The Examiner rejects claims 1-15 under 35 U.S.C. § 102(b) as being anticipated by Robertson.

### ISSUE

Based on our review of the administrative record, Appellant's contentions, and the Examiner's findings and conclusions, the pivotal issue before us is as follows:

Does the Examiner err in finding Robertson discloses an input device having a range of motion in three dimensions?

## FINDINGS OF FACT (FF)

### *Robertson Reference*

1. Robertson describes utilizing a “two-dimensional” input device (Abstract), i.e., an input device having a range of motion in two dimensions, to manipulate objects on a simulated three-dimensional surface. (Abstract; col. 6, l. 51 to col. 7, l. 12; col. 9, ll. 51-63.)

2. Robertson does not describe an input device having a range of motion in three dimensions. Rather, Robertson describes mapping two-dimensional inputs to a simulated three-dimensional environment (col. 9, ll. 36-63) – “the present invention may map two-dimensional inputs, such as moving a mouse on a mouse pad, to a three-dimensional movement on the simulated three-dimensional display” (col. 9, ll. 60-63).

## ANALYSIS

Appellant has the opportunity on appeal to the Board of Patent Appeals and Interferences (BPAI) to demonstrate error in the Examiner’s position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (citing *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). The Examiner sets forth a detailed explanation of a reasoned conclusion of anticipation in the Examiner’s Answer with respect to Appellant’s independent claim 1 (Ans. 3-4, 7-9), and independent claim 2 (Ans. 3-4, 9-11). Therefore, we look to the Appellant’s Briefs to show error in the proffered reasoned conclusion. *See Kahn*, 441 F.3d at 985-86.

*Arguments Concerning the Examiner's Rejection of  
Claims 1-15 under 35 U.S.C. § 102(b)*

The Examiner rejects Appellant's independent claim 1 and independent claim 2 for being anticipated by Robertson. (Ans. 3-4.) The Examiner finds that Robertson discloses utilizing an input device to move objects in a three-dimensional interface, i.e., Robertson discloses "a three-dimensional user interface for managing documents" that "permit[s] users to drag documents in a the X-Y plane and pull documents in the Z dimension," and "the drag and pull operations are actions performed by an input device." (Ans. 7.) The Examiner concludes that there is no distinguishable difference between Robertson's disclosed three-dimensional movements, and the three-dimensional range of motion recited by Appellant – "Examiner sees no difference between Robertson's three dimensional movements and the applicant's range of motions in three-dimensions." (Ans. 7.) Appellant contends, *inter alia*, that Robertson does not teach "interaction with a device moveable in three dimensions" (App. Br. 6) or "even suggest[] the use of a three-dimensional input device" (App. Br. 7).

Based on the record before us, we find error in the Examiner's anticipation rejection of Appellant's claims 1 and 2. We agree with Appellant that Robertson does not disclose the disputed feature of "an input device having a range of motion in three dimensions" for essentially the reasons espoused by Appellant. We begin our analysis by construing the disputed feature.

The dispute before us hinges on the disagreement of the Examiner and Appellant as to what constitutes "an input device having a range of motion in three dimensions." We note that this feature is recited (in its entirety) only in the claim preamble. The body of each claim, however, recites "the

input device” in conjunction with various functions associated with the input device. Here, the preamble provides meaning to the limitations reciting “the input device,” and so we interpret these limitations in view of the recitation in the preamble:

In general, a preamble limits the invention if it recites essential structure or steps, or if it is “necessary to give life, meaning, and vitality” to the claim. Conversely, a preamble is not limiting “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.”

*Catalina Marketing International v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999); *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997) (citations omitted)). Accordingly, we construe “the input device” recited in the body of Appellant’s claims to mean the input device is operable/moveable (having a range of motion) in three physical dimensions.

As detailed in the Findings of Fact section *supra*, Robertson describes an input device having a range of motion in two dimensions and mapping two-dimensional inputs to a simulated three-dimensional environment. (FF 1 & 2.) Appellant correctly identifies that Robertson does not even mention an input device having a range of motion in three dimensions. (App. Br. 7.) There is no disclosure in Robertson of an input device operable in three physical dimensions.

Consequently, we are constrained by the record before us to find that Robertson does not disclose at least the disputed feature of “an input device having a range of motion in three dimensions.” The Examiner has failed to set forth a *prima facie* anticipation rejection. It follows that Appellant has

persuaded us to find error in the Examiner's anticipation rejection of Appellant's independent claims 1 and 2.

Appellant's dependent claims 3-15 depend on claim 2. Therefore, based on the record before us, we find that the Examiner erred in finding Robertson discloses each limitation recited in Appellant's claims 1-15. Accordingly, we reverse the Examiner's anticipation rejection of these claims.

#### CONCLUSIONS OF LAW

Appellant has shown that the Examiner erred in rejecting claims 1-15 under 35 U.S.C. § 102(b).

#### DECISION

We reverse the Examiner's rejection of claims 1-15 under 35 U.S.C. § 102(b).

#### REVERSED

msc

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